

Puget Sound Partnership 2009 Three Year Work Program Update Nisqually Watershed

Introduction

In May 2009, each of the fourteen watersheds chapter areas submitted three-year work program updates on accomplishments, status of actions, and proposed actions that built on the 2006, 2007, 2008 three-year work programs. These work programs are intended to provide a road map for implementation of the salmon recovery plans and to help establish a recovery trajectory for the first three years of implementation.

The 2009 Three-Year Work Program Update is the fourth year of implementation since the Recovery Plan was finalized in 2005. The Puget Sound Partnership, as the regional organization for salmon recovery performs an assessment of the development and review of these work programs in order to be as effective as possible in the coming years.

The feedback below is intended to assist the watershed recovery plan implementation team as it continues to address actions and implementation of their salmon recovery plan. The feedback is also used by the Puget Sound Recovery Implementation Technical Team (RITT), the Recovery Council Work Group, and the Puget Sound Partnership to inform the continued development and implementation of the regional work program. This includes advancing on issues such as adaptive management, all H integration, and capacity within the watershed teams. The feedback will also stimulate further discussion of recovery objectives to determine what the best investments are for salmon recovery over the next three years.

Guidance for the 2009 work program update reviews

Factors to be considered by the RITT in performing its technical review of the Update included:

- 1) *Consistency question*: Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?
- 2) *Pace/Status question*: Is implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, why and what are the key priorities to move forward?
- 3) *Sequence/Timing question*: Is the sequencing and timing of actions appropriate for the current stage of implementation?
- 4) *Next big challenge question*: Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?

Watersheds were also provided with the following four questions, answers to which the Recovery Council Work Group and the Partnership ecosystem recovery coordinators assessed in performing their policy review of the three-year work program:

- 1) *Consistency question:* Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the needs identified in the Recovery Chapter (Volume I and II of the Recovery Plan, NOAA supplement)? Are the suites of actions and top priorities identified in the watershed's three-year work plan/program consistent with the Action Agenda?
- 2) *Pace/Status question:* Is implementation of salmon recovery on-track for achieving the 10-year goals?
- 3) *What is needed question:* What type of support is needed to help support this watershed in achieving its recovery chapter goals? Are there any changes needed in the suites of actions to achieve the watershed's recovery chapter goals?
- 4) *Next big challenge question:* Does the three-year work program reflect any new challenges or adaptive management needs that have arisen over the past year either within the watershed or across the region?

I. Puget Sound Recovery Implementation Technical Team Review

The RITT reviewed each of the fourteen individual watershed chapter's salmon recovery three-year work program updates in May and June 2009. The RITT evaluated each individual watershed according to the four questions provided above. In the review, the RITT identified a common set of regional review comments for technical feedback that are applicable to all fourteen watersheds, as well as watershed specific feedback using the four questions. The regional review, along with the watershed specific review comments, are included below.

Puget Sound Recovery Implementation Technical Team Review

RITT Review – 2009 Three-Year Work Plans – Common Themes

The changes to the watershed questions and RITT review questions reflect a stronger focus on obtaining information associated with the status of implementation and the development of the Adaptive Management and Monitoring plans, as it relates to what actions are needed for the next three years. Many of the watersheds had a difficult time answering these questions and either did not answer these questions or did not provide much detail. The intent of the questions was to get watersheds to think about how actions identified on their three-year work plans relate to the current status of implementation, existing assessments, and Adaptive Management Plans. As the RITT reviewed all the work plans, we recognized some common themes we wished to bring to the attention of the watershed groups. While all these may not be able to be addressed in this year's 3-yr work plans, the RITT is available to work with the watersheds to address these in future plans or as part of the Adaptive Management Plan process now in progress.

1. Question 6 to the watersheds: "What is the **status or trends of habitat and salmon populations** in your watershed?" The intention of this question was to begin work on the relationship between projects and a baseline understanding of trends in each watershed and/or watersheds to think about trends, or at least what is happening to monitor/assess trends. This information will become important in developing the adaptive management plans and watersheds should be assembling existing information or developing projects to assess this.

2. Most work plans have been primarily focused on habitat restoration projects. Although habitat restoration is a critical aspect of salmon recovery, it is also important to identify actions related to the implementation of habitat protection and hatchery and harvest management that affect salmon populations, and then start thinking of all projects in terms of **H-integration**. How do each of the H's influence results from the other Hs? Again, this will be an important component of adaptive management, and therefore, should be addressed in the 3-yr work plans now. What is needed to get started on H-integration?

Six steps of h-integration have been suggested to help get started (Shared Strategy workshop 2006):

1. Identify the people needed to participate, covering all Hs
 2. Gain a common understanding of how the H's influence the salmon system
 3. Agree upon common goals for improving salmon
 4. Select a suite of complimentary actions covering the Hs that address the goals (these should then be placed in the work plans)
 5. Document implementation of actions and expected outcomes (in work plans)
 6. Monitor, report, and adjust (adaptive management!)
3. **Habitat protection** was recognized as an important element of salmon recovery in both the Shared Strategy Puget Sound Chinook Recovery Plan and in the NOAA supplement to the plan. NOAA, in the supplement, recognized there are a variety of tools available for habitat protection and that a combination of all approaches, including incentives and enhanced regulatory programs likely will be needed to achieve the level of habitat protection required to support salmon recovery in Puget Sound. What was unclear in the Recovery Plan in dealing with protection is whether the current rate of degradation or loss of habitat was taken into consideration when measuring the influence of habitat protection necessary for overall salmon recovery. There are a number of tools/models available for assessing net gain or loss of habitat, and these should be explored by the individual watersheds.

The RITT is available to work with the watersheds to support them in answering these questions and identifying gaps in information. This can be done both via the adaptive management process as well as by inviting RITT liaison/members to attend watershed meetings to address this.

4. Although significant advancement has occurred associated with **prioritization and sequencing** of suites of actions, additional refinement is important in order to restore the functions and processes of the watersheds for salmon recovery. There are a variety of tools that are available, and being used in some watersheds for this endeavor. RITT liaisons are available to talk with watershed leads about ideas on how to proceed.
5. **Updating Recovery Plan chapters**. Another issue that arose was what to do about, or how to document, changes that are being made now to the Salmon Recovery Plan chapter goals or directions. All watersheds have modified their thinking about limiting factors and appropriate strategies and actions to some degree since the plan was adopted. We

expect more changes in the future as we learn more about the systems and we apply results from the Adaptive Management process. Until there is a formal process adopted to document such changes in “plans”, each watershed should be carefully documenting changes in their recovery goals and directions, along with the back up supporting research or work, in their 3-yr work plan narratives. This will allow the RITT to take these changes into account while reviewing the work plans for consistency with “the plan.”

6. One of the biggest challenges associated with implementing the salmon recovery plan for Puget Sound Chinook is the development of realistic, useful, and applicable **Adaptive Management Plans** at the watershed level. The RITT has committed to working closely with the watershed over the next several years to getting these written and implemented. This will be done with a series of work sessions, both with individual watersheds and across watersheds. Much time, commitment, and resources are also needed from the watershed leads, planners and implementers of actions associated with the recovery plan. It will help the collaborative process greatly if watersheds begin addressing the above themes at greater detail each year as they develop their 3-yr work plans. Don’t wait for your first workshop with RITT to get started.

Finally, one of the issues the RITT recognized was that, although the review questions ask for progress towards the “10-yr goals” in the Salmon Recovery Plan, not all Watershed Chapters identified quantitative 10-yr or other short-term goals. The RITT will work with watersheds to identify these types of short-term goals during the development of the Adaptive Management plans.

Watershed Specific Comments for the Nisqually Watershed:

In general, the major direction of the three-year work program has not changed over the last several years.

- 1) *Consistency question: Are the suites of actions and top priorities identified in the watershed’s three-year work plan/program consistent with the hypotheses and strategies identified in the Recovery Plan (Volume I and II of the Recovery Plan, NOAA supplement)?*
Yes, the work program is consistent with the recovery hypotheses and strategies for the watershed. As noted in the work program description, the watershed has spent considerable effort developing watershed hypotheses and protection and restoration strategies based on EDT modeling. The work program continues to use the conclusions of those modeling efforts to guide and prioritize watershed restoration and salmon recovery. The work program includes projects aimed to improving all four attributes of viable salmonid populations (abundance, productivity, diversity and spatial structure).
- 2) *Pace/Status question: Is implementation of the salmon recovery plan on-track for achieving the 10-year goal(s)? If not, why and what are the key priorities to move forward?*

It is difficult to answer conclusively whether implementation of the salmon recovery plan is on track for achieving 10-year goals. The implementation of habitat actions needed to meet 10-year goals appears to be on track. The watershed continues to emphasize habitat protection and restoration. With nearly 75% of the habitat in the watershed protected, the Nisqually is among the best protected watersheds in the Puget Sound. However, it is not clear from the three-year work plan whether that will be adequate to meet the 10-year goal of “no further degradation.” Using EDT modeling as a gage of effectiveness, analyses suggest that restoration activities will increase diversity, productivity, and capacity (abundance) as a result of the three-year work program consistent with 10-year goals for habitat restoration. We have scientific concerns, however, about using EDT modeling results as a way to measure progress unless the results incorporate uncertainty. For example, point estimates of productivity of 3.7 (current) versus 5.3 (expected from work program) may appear to be significant progress, but after including the confidence intervals, the two estimates may not be detectably different. We strongly recommend incorporating uncertainty into EDT analyses if they are to be used to gage effectiveness.

A major 10-year goal is to have 1,200 natural origin Chinook on the spawning grounds while allowing less than 5% of the natural spawning population to be hatchery origin fish. The five-year benchmark is to reduce the proportion of hatchery fish on the spawning grounds from 76% to 10%. The three-year work plan describes projects to achieve these goals (e.g., the installation of a weir in 2010 to remove hatchery fish or harvest management analyses). In earlier review (2006, 2007, 2008), the TRT noted that it might make sense to begin construction and trial operation of the weir sooner than planned (currently in 2010) to be able to work through logistical and technical problems that are likely to occur. That did not happen. When the weir is installed finally, we will have a much better sense of whether the recovery actions will be able to meet five-year and 10-year goals.

3) *Sequence/Timing question: Is the sequencing and timing of actions appropriate for the current stage of implementation?*

In general, it appears that the sequencing and timing of the actions in the work program are appropriate. The work program does not explicitly address sequencing, but it is possible to infer a sequencing strategy. As noted earlier, in recent years the watershed has invested considerable effort in protection of key habitats and restoration of the estuary. Protecting existing habitat and restoring additional habitats are essential first steps in the sequence if subsequent changes in hatchery management or harvest are to succeed in rebuilding natural production. Both urgency and response times are different for different activities. In this watershed, protecting good habitat is urgent to keep it from being lost. Beginning restoration activities early in the recovery sequence is important because it takes longer for habitat to recover to the point that it produces the desired responses in fish populations. Hatchery actions do not take as long to produce desired affects on some fish population characteristics, such as abundance and spatial distribution, and harvest can produce some of the quickest responses when adequate habitat is available.

- 4) *Next big challenge question: Does the three-year work plan/program reflect any new challenges or adaptive management needs that have arisen over the past year?*

Yes. With the continued development of the Nisqually Adaptive Management Framework and the identification of different monitoring and adaptive management needs (e.g., Table 6), the three-year work plan includes more detail on the kinds of monitoring, management support and coordination, and research needed to reduce critical uncertainties associated with the recovery strategies.

In general, the major components needed to move forward are here. In earlier reviews, the TRT and RITT stressed the need for collecting key information on the populations and not relying completely on modeled results. Seeing information in the Nisqually Adaptive Management Framework on the number of natural origin spawners and number of hatchery origin spawners, which had not been reported before 2006, is encouraging.

The RITT is working with watersheds to advance watershed scale adaptive management within the next 16 months. The RITT recognizes the good work Nisqually has made to develop a draft adaptive management and monitoring framework and will work directly with Nisqually to coordinate efforts and provide assistance in the fall of 2009.

Lack of sufficient funds and resources is a major challenge to salmon recovery for all watersheds; it is therefore important to use the funds received wisely and get the most knowledge for future direction out of a well developed adaptive management plan.

II. Policy Review Comments

The Recovery Council Work Group, an interdisciplinary policy team made up of lead policy staff in federal, state, local agencies, as well as a lead policy staff representative from the Northwest Indian Fisheries Commission, evaluated each of the fourteen watershed work plans. In addressing their review questions, outlined above, the interdisciplinary team noted both general comments common to all watersheds within the region, as well as significant advancements and issues needing advancement that are watershed specific and need special attention. The general and watershed specific comments follow below.

General Comments for 2009 Three-Year Work Program Updates

In 2009, the watershed three-year work program update process was refined, with input from both watershed groups and the region, to reflect the changing needs of the salmon recovery effort in Puget Sound. Although the spreadsheet will remain the same for the near-term, refinement of the process, including the schedule and questions, will likely continue over the years to accommodate emerging needs and issues.

The 2009 work program updates reflect the continued advancement and increased sophistication of watersheds in strategically identifying important projects and programs. This was perhaps best demonstrated during the recent process to identify ‘shovel-ready’ projects for the NOAA stimulus process, as well as compiling projects in preparation for the 2009-2011 biennial budget request. Similar to the 2007-2009 round of Puget Sound Acquisition and Restoration funds,

funding in the 2009-2011 round provides watersheds another opportunity to advance important capital and non-capital priorities.

Despite these gains, both in funds and in work programs, many of the watersheds continue to have gaps, to varying degrees, identified in the NOAA supplement as well as in the 2006, 2007, and 2008 work program reviews. Regional assistance to the watershed implementation teams will continue to be needed to fill the needs identified within this 2009 Work Program (see below). Regional assistance will also be needed to continue work towards securing consistent capital and non-capital funds needed to advance recovery work.

Work Program Narratives (Accomplishments, Status Updates, Sequencing and Prioritization):

As identified in 2007 and 2008, work program updates are a useful tool for documenting progress toward recovery plan goals and ESU-wide recovery. As a part of the updates, the narratives should continue to be refined to provide a sharper focus on what each watershed expects to accomplish within the three-year period. These narratives should also document what projects have been successfully completed, what programmatic actions are underway, and how successful the watershed has been in implementing the previous year's work plan. This includes documenting how the funds of the previous year are being applied for both on-the-ground projects and capacity within the watersheds. It is also helpful for narratives to include a focused description of how various recovery projects and programs are identified, prioritized, and sequenced. Finally, documentation of what support is needed to implement priority actions will help the region better understand how to support watershed implementation of recovery actions.

Monitoring and Adaptive Management: The majority of watersheds indicated that advancing monitoring and adaptive management was of high priority and the 'next big challenge' in their areas. Some watersheds have already begun developing their own monitoring and adaptive management frameworks and initial monitoring tasks. These efforts are critical to refining the implementation of recovery actions, and to help prioritize how funds are allocated. Additionally, several watersheds have continued to advance their understanding and application of the six steps of H-Integration through the strong support of co-manager resources. It is noteworthy that there is a strong connection between full co-manager engagement within the watershed context and significant progress toward salmon recovery implementation. This work to develop a monitoring and adaptive management plan, as well as advance the h-integration, directly fills a critical gap identified in by NOAA in their supplement to the Recovery Plan. Another element of this work is the recently agreed-upon Pacific Salmon Treaty, which should be funded and then the relevant components incorporated into the effort associated with monitoring and adaptive management.

The region is committed to supporting watersheds advance their efforts to develop and implement a monitoring and adaptive management plan in a way that acknowledges the interaction across habitat, harvest, hatchery, and hydropower management decisions. At the regional scale, several actions have been initiated to advance adaptive management, including:

1. RITT near-term guidance for initial steps;
2. A program to advance monitoring and adaptive management in each watershed chapter area by the RITT and Partnership, which includes looking at the 6 steps of H-Integration;

3. Monitoring for habitat status and trends at the regional scale by the Department of Ecology, starting in the Puget Sound; and
4. Development of a performance management system to identify and hold accountable the appropriate entities at the local, regional, state, and federal levels for actions associated with salmon recovery.

In 2008, three watersheds participated in a pilot project to better understand how implementation actions can be tracked locally and regionally. These three watersheds – North Olympic Peninsula, Green/Duwamish, and Stillaguamish – used considerable resources to participate in this process and have integrated the information that they produced into their local processes in varying ways. The region is continuing to work on a tracking system and appreciates the effort that went into participating in this pilot project.

The regional team working on the diverse aspects of adaptive management will coordinate with these various efforts in order to ensure that they are consistent and complementary. It will be critical that these efforts continue to advance our existing work and be informed by guidance documents.

Protecting and restoring ecosystem functions and processes for Chinook and other species: Preserving options and addressing threats are critical components of recovery planning both at the local and regional scale. The Chinook Recovery Plan is predicated on the assumption that existing habitat will be protected. Regional work to assess this assumption and to strengthen the regulatory framework is important to advance salmon recovery. The San Juan Initiative has shown that existing regulations along the nearshore are generally not applied in the most protective manner and that nearshore habitat is being lost. The Action Agenda has similarly found that we are not protecting our landscape as originally assumed and that this is a high priority for ecosystem recovery. This includes ecosystem functions associated with water quality and water quantity.

Recovery actions continue to become more complex and expensive. All watersheds are challenged in terms of their capacity to protect habitat and ecosystem functions and processes, as well as to secure future options to implement large-scale, multi-year restoration projects. Protection tools include acquisition of land (e.g., through fee simple purchase or conservation easement), as well as regulations, incentive programs, and education/outreach. An additional tool for both protection and restoration is the continued establishment and coordination with working lands in a way that helps maintain these lands and protects ecosystem functions and processes. Several timely opportunities associated with regulatory tool of protection are currently available, including the upcoming Shoreline Master Program Updates and on-going Critical Areas Updates, as well as the results of the Biological Opinion by NOAA on FEMA's Flood Insurance Program.

Similarly, the availability of consistent, clean water continues to be a concern and a gap identified in the NOAA supplement. It is critical that the work associated with implementation the Action Agenda, primarily through the Department of Ecology and local jurisdictions, advances water quality and quantity issues in a way that supports the watershed groups and advances the recovery of salmon in their areas.

It will be important for watersheds to coordinate and partner with other groups, organizations, and agencies, both locally and regionally, to increase capacity and enhance their ability to successfully identify and implement habitat protection and restoration efforts. Increased capacity for the key participants in watershed recovery efforts is essential to successfully implementing recovery chapters and protecting and restoring the ecosystem functions and processes that Chinook and other species require. The Puget Sound Partnership and the Recovery Council Policy Work Group acknowledge that additional efforts will be needed at the regional scale to assist watershed groups in securing on-going resources needed to protect and restore ecosystem functions and processes.

Nearshore Habitats, Functions, and Processes: There continues to be a need to advance our understanding of nearshore habitats, functions, and processes associated with Chinook recovery. The results of several nearshore fish assessments funded in 2007 will be available in the upcoming year and will help fill a major gap in our knowledge of salmonid use of the nearshore. The Puget Sound Partnership and Policy Work Group recognize the need to support these watersheds in translating the assessments into a prioritization framework for protecting and restoring the nearshore. We also recognize the importance of these assessments for advancing monitoring and adaptive management plans in the nearshore. Additionally, there is a continued need make decisions regarding the sequencing and prioritizing of nearshore areas for protection across the Puget Sound. Finally, we need to develop a standardized framework to not only monitor nearshore fish presence, but to also improve our understanding of how fish utilize these areas.

Multi-species planning and Action Agenda implementation: Implementation of the Action Agenda, along with multi-species planning efforts such as for the Puget Sound Steelhead, requires significant effort to sequence and prioritize resources and actions. The Puget Sound Partnership and the Policy Work Group recognize that implementation of salmon recovery actions remains a high priority, as identified in the Action Agenda. Maintaining a focus on the priorities within the salmon recovery plan, as identified in each watershed chapter plan, will be increasingly challenging and require continued investment of time, resources, and support.

In terms of multi-species planning efforts, Puget Sound Steelhead were listed as threatened under the Endangered Species Act in May 2007 and a NOAA-appointed Technical Review Team (TRT) is working to identify populations and habitat criteria for the listing. This information is anticipated to be available by the end of 2009. NOAA, the co-managers, and the watersheds are currently discussing options for Puget Sound Steelhead recovery planning. Resources are needed to support the watersheds in steelhead planning over the next several years.

Nisqually Watershed-Specific Comments

Significant Improvements:

- Developed draft adaptive management framework to direct monitoring and evaluation of watershed recovery efforts.
- Advancing all elements of salmon recovery through strategic prioritized habitat protection and restoration, implementation of a seasonal weir on the Nisqually River in 2010, and development of a stock management plan.

- Completed large-scale restoration projects in the Nisqually Estuary and Mashel River that significantly advance restoration of ecosystem processes and watershed recovery, including raising broad awareness and support at the local, regional, state, and federal levels. In particular, the Nisqually Estuary Restoration project is important for Puget Sound recovery and involved substantial regional participation.
- Clearly and comprehensively articulate strategic watershed and key project sponsor capacity needs to advance recovery.

Issues to Advance:

- Seek opportunities to test modeling results that helped establish watershed recovery goals.
- Continue to refine the draft Nisqually adaptive management and monitoring framework to advance and refine the approach to salmon recovery in the watershed. In the coming year the watershed should continue to advance this work and integrate it with the RITT-lead watershed scale adaptive management and monitoring effort.
- Strategically prioritize programmatic actions to identify how to advance salmon recovery priorities, support implementation of capital actions, and devote limited capacity funds.